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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,829	11/15/1999	ALEX CHENCHIK	CLON-015	3481

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EXAMINER

FORMAN, BETTY J

ART UNIT	PAPER NUMBER
1655	18

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/440,829	CHENCHIK ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	BJ Forman	1655

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 November 2001 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a)  The period for reply expires 3 months from the mailing date of the final rejection.

b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1.  A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2.  The proposed amendment(s) will not be entered because:

- they raise new issues that would require further consideration and/or search (see NOTE below);
- they raise the issue of new matter (see Note below);
- they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attached Continuation of Advisory Action.

3.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 4.  Newly proposed or amended claim(s) \_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 5.  The a) affidavit, b) exhibit, or c) request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
 6.  The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
 7.  For purposes of Appeal, the proposed amendment(s) a) will not be entered or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: 1-3 and 7-38.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.  
 8.  The proposed drawing correction filed on \_\_\_\_ is a) approved or b) disapproved by the Examiner.  
 9.  Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). 16.  
 10.  Other:

**Continuation of Advisory Action**

**Regarding Claims 36-38**

1. Applicant argues that one of skill in the art would clearly understand the phrase "hybridization efficiency" and how to determine a variance of the efficiency as recited in Claims 36-38. Applicant further argues that in view of the knowledge of one skilled in the art coupled with the working examples within the specification, the claims are clear and not indefinite. The argument is not found persuasive because while the specification teaches hybridization efficiency (page 43, lines 1-25) and while the specification generally discusses hybridization efficiency, (page 25, lines 9-27), the claims are indefinite for omitting essential elements which define or describe "variance in hybridization efficiency" and "10-fold variance in hybridization efficiency".

**Regarding Claims 1-3 and 10-22**

2. Applicant argues that Bresser does not disclose an array of nucleic acid probes "attached to a solid surface". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., attached to a solid surface) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the claimed probes provides unexpected results as illustrated in Example 6 and discussed in the previously filed Declaration. However, as discussed previously, Example 6 does not provide adequate support for unexpected results because Example 6 does not provide a comparison which would provide evidence of unexpected results e.g. a comparison to hybridization results for probes of longer than 100 or shorter than 50. Additionally, the Declaration of Dr. Chenchik is not found persuasive because it merely states

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that it was expected that "hybridization efficiency would be the same regardless of probe length". The Declaration does not provide evidence of such expectation. Evidence of such expectation (equal hybridization efficiency) could include a demonstration of the hybridization efficiency for probes longer than 100 or shorter than 50. However, the Declaration does not provide such evidence.

**Regarding Claims 7 and 23**

3. Applicant argues that Brown et al. and Bresser et al. fail to teach the claimed length range and Chetverin et al. fails to make up this fundamental deficiency and therefore, Claims 7 and 23 are not obvious over the combination of Brown, Bresser and Chetverin. The argument is not found persuasive because as stated in the previous action, Brown et al. teaches the preferred probe length of at least 50 nucleotides (Column 13, lines 21-25). The courts have stated that in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists.

*In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered *prima facie* obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms]." The court stated that "by stating that suitable protection' is provided if the protective layer is about' 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant's] claimed range.") (see MPEP 2144.05 I).

Additionally, the courts have stated that where the general conditions are known in the art "it is not inventive to discover the optimal or workable ranges by routine experimentation" (*In re Aller*, 220 F.2d 454,456, 105 USPQ 233,235). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to optimize the probe length in the array of Brown et al. using routine experimentation by attaching probes of 50 to

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100 nucleotides to the solid support for the expected benefit of discovering the optimal range of nucleotide probe length.

Applicant argues that Bresser et al. do not teach probes attached to a solid support and therefore one of skill in the art would not be motivated to combine the teaching of Bresser et al. and Brown et al. The argument is not found persuasive because Bresser et al. who teach probes of 50 to 120 nucleotides provide the most sensitive, rapid and stable hybridization (Column 9, lines 50-58) was merely cited in the action as a general teaching of hybridization efficiency (i.e. hybrid formation and stability) which is not limited to probes in solution. Therefore, one skilled in the art would have been motivated to apply the general teaching of preferred probe length of Bresser et al. to the probes in the array of Brown et al. for the obvious benefits of sensitive, rapid and stable hybridization as taught by Bresser et al. (Column 9, lines 50-58).

#### **Regarding Claims 8 and 9**

4. Applicant argues that the combined teaching of Brown et al. and Bresser et al. fail to teach or obviate the claimed range of oligonucleotide length and the teachings of Chetverin and Graves fail to make up the deficiency of Brown and Bresser. The argument has been considered but is not found persuasive for the reasons stated above i.e. claimed ranges within the prior art (Brown et al.) are obvious and because it would have been obvious to use routine experimentation to optimize the ranges taught by Brown et al.

#### **Regarding Claims 36 and 37**

5. Applicant argues that the combined teaching of Brown et al. and Bresser et al. fail to teach or obviate the claimed range of oligonucleotide length. The argument has been considered but is not found persuasive for the reasons stated above i.e. claimed ranges within

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the prior art (Brown et al.) are obvious and because it would have been obvious to use routine experimentation to optimize the ranges taught by Brown et al.

### **Regarding Claim 38**

6. Applicant argues that the combined teaching of Brown et al. and Bresser et al. fail to teach or obviate the claimed range of oligonucleotide length and the teaching of Chetverin fails to make up the deficiency of Brown and Bresser. The argument has been considered but is not found persuasive for the reasons stated above i.e. claimed ranges within the prior art (Brown et al.) are obvious and because it would have been obvious to use routine experimentation to optimize the ranges taught by Brown et al.

### **Conclusion**

7. No claim is allowed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:45 TO 4:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



BJ Forman, Ph.D.  
November 29, 2001



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